

REMARKS

Claims 14-22 have been canceled. Claims 23-34 have been newly added and are the only pending claims. Support for the amendments is found in the specification and claims as originally filed. Applicant submits that no new matter has been introduced by the newly added claims or the amendments to the specification.

Canceled claim 14 has been rewritten as claims 23 and 29. Claim 23 recites the blend of carbon black and white filler found in the reinforcing filler, while claim 29 recites white filler as the sole filler in reinforcing filler. Accordingly, dependent claims 24-27 correspond to canceled claims 18, 15, 16, and 17, respectively. Dependent claim 28 corresponds to canceled claims 21 and 22. Dependent claims 30-32 correspond to canceled claims 19, 15, and 16, respectively. Dependent claim 33 corresponds to canceled claims 21 and 22.

Furthermore, claim 23 has been written to recite a blend of carbon black and white filler found in the reinforcing filler in an amount of between 20-45 phr. The support for the language, "in an amount between 20 phr and 45 phr," can be found in the specification at page 6, lines 20-21.

In addition, applicant requests entry of the Amendment After Final mailed March 13, 2003.

35 U.S.C. § 112 Objections

As indicated in the Advisory Action mailed April 9, 2003, the Examiner has objected to amended claim 14 under 35 U.S.C. § 112, first paragraph, for failing to

satisfy the written description requirement. In particular, the Examiner objects to the range limitation of blend of carbon black and white filler in an amount "greater than or equal to 15 phr and less than 50 phr," and the range limitation of reinforcing filler in an amount "less than 50 phr." Furthermore, the Examiner objects to claim 14 for being indefinite for reciting a broad range or limitation together with a narrow range of limitation falling within the broader range.

Claims 14-22 have been canceled and thus the concerns raised by the Examiner has been rendered moot. New claims 23-34 do not recite the language "greater than or equal to 15 phr and less than 50 phr" with regard to the blend of carbon black and white filler, "less than 50 phr" with regard to reinforcing filler, or a narrow range within a broader range. As a result, applicant submits that new claims 23-34 satisfy the written description requirements of 35 U.S.C § 112, first paragraph, and clearly point out and distinctly claim the invention, satisfying 35 U.S.C. § 112, second paragraph.

Claims 23-34 are not anticipated or obvious in view of JP 09302146

JP 09302146 relates to a bead filler composition designed for durability and fatigue resistance. It discloses a rubber composition comprising a diene-based rubber, carbon black and silica (Abstract, lines 3-4). The carbon black may be present between 0-50 phr in combination with silica at between 20-150 phr. JP 09302146 also teaches that the total amount of carbon black and silica used in combination must be between 50-150 phr (paragraph [0008], lines 6-7). In fact, the Abstract clearly indicates that "the *respective* amounts of carbon black and silica *sum to* 50-150 pts.wt..." (Abstract, lines 4-5, *emphasis added*).

In the Advisory Action mailed April 9, 2003, the Examiner acknowledges that JP 09302146 discloses the use of 50 phr carbon black and silica and that it would no longer be applicable as a reference under 102 against canceled claim 14 (Advisory action, lines 8-10).

New claim 23, as stated above, corresponds to canceled claim 14. However, claim 23 recites a blend of carbon black and filler in an amount of between 20-45 phr. New claim 23 recites a narrower range, i.e. between 20-45 phr, than canceled claim 14, i.e. 15-50 phr. In comparison to the range disclosed by JP 09302146, i.e. 50-150 phr, there is no overlap with the narrowed range recited in claim 23. Thus, JP 09302146 cannot anticipate new claim 23.

In the Advisory Action mailed April 9, 2003, the Examiner also argues that a "slight" difference between the amount of carbon black and silica disclosed by JP 09302146 and the amount disclosed in canceled claim 14 would be an obvious variant to one of skill in the art.

With regard to newly added independent claim 23 and dependent claims 24-28, Applicant submits that one of skill would not view the claimed range of between 20-45 phr as an obvious variant of the range of 50-150 disclosed by JP 09302146. Since there is no overlap in the disclosed range and the claimed range and a difference of at least 5 phr, the difference between the ranges is much greater than "slight." Not only is there no overlap between the ranges, JP 09302146 teaches away from the addition of filler in lower values of the disclosed range of 50-150. JP 09302146 recommends the addition of high amounts of filler to the rubber composition. Upon a reading of JP 09302146, one of skill in the art would not be motivated to improve upon the invention

by investigating values in the lower range. Furthermore, there is certainly no suggestion that values below the 50-150 phr would be beneficial.

Furthermore, the rubber compositions comprising the presently claimed range of between 20-45 phr of carbon black and silica unexpectedly exhibit better cohesion in comparison to a rubber composition comprising a blend of carbon black and silica of 55 phr (test 3 control), which falls within the range disclosed by JP 09302146 (Table 2, page 11). Test examples 1 and 2, each rubber composition having a blend of carbon black and silica of 40 phr, show much higher break and tearability indexes at 100°C, 800 and 780, respectively, than the value of 490 exhibited by test 3 control. Test examples 1 and 2 also show much lower hysteresis losses, (HL 60° of 13.5 and 15 in comparison to 18 for test 3 control). This side by side comparison of rubber composition of the present invention and a rubber composition of the cited art demonstrates the criticality of the claimed range. Any values that is even slightly above the claimed range of 20-45 phr, for example 55 phr as shown in test 3 control, fails to fulfill the desired characteristics of high cohesion and low hysteresis.

With regard to newly added independent claim 29 and dependent claims 30-34, Applicant submits that JP 09302146 does not anticipate the claimed range of between 15-40 phr of white filler. The Examiner has interpreted the range of white filler disclosed in JP 09302146 as 20-150 phr. In fact, the minimum amount of white filler should be 50 phr. Although carbon black may be in a range of 0-50 phr and silica may be present in 20-150 phr, the total amount of carbon black and silica must be at least 50 phr. The Abstract clearly indicates that "the *respective* amounts of carbon black and silica *sum to* 50-150 pts.wt..." (Abstract, lines 4-5, *emphasis added*). To properly interpret the

translation, one must consider the meaning of "respective" amounts of carbon black and silica. Used in this context, "respective" can be defined as relating to two or more persons or things regarded individually; particular. When applying this definition to the range, one of skill in the art would interpret that the individual amounts of carbon black and silica are added together to produce a minimum sum of 50 phr. Although 0 phr of carbon black is an acceptable amount, the rubber composition disclosed by JP 09302146 must have at least 50 phr, not 20 phr, of silica to compensate for the total absence of carbon black. The acceptable range of 20-150 phr of silica must be interpreted in context of the whole disclosure. Here, the limitation on the total amount of carbon black and silica used is 50-150 phr. JP 09302146 does not reasonable disclose a range of 20-150 phr of silica when used in the absence of carbon black. Further support for this interpretation can be found in Tables 1 and 2, which list rubber compositions having 100 phr of silica in the absence of any carbon black. Therefore, JP 09302146 does not anticipate the presently claimed range of between 15-40 phr of white filler as the sole filler in the rubber composition.

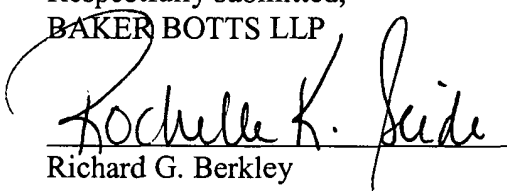
For the foregoing reasons, Applicant submits that claims 23-34 are not anticipated by and are not obvious in view of JP 09302146.

CONCLUSION

Applicant respectfully submits that newly presented claims 23-34 are in condition for allowance. A Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge payment of any fees or credit any overpayment made in association with this communication to Deposit Account No. 02-4377. A duplicate copies of this paper is enclosed.

Respectfully submitted,
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